



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,328	09/25/2003	Ja Young Park	2336-205	4136

7590 12/10/2007  
LOWE HAUPTMAN GOPSTEIN GILMAN & BERNER, LLP  
Suite 310  
1700 Diagonal Road  
Alexandria, VA 22314

EXAMINER

JUNTIMA, NITTAYA

ART UNIT	PAPER NUMBER
----------	--------------

2616

MAIL DATE	DELIVERY MODE
-----------	---------------

12/10/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/669,328

Applicant(s)

PARK, JA YOUNG

Examiner

Nittaya Juntima

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 20 is/are rejected.
- 7) ☒ Claim(s) 9-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/25/03, 8/8/05, 5/8/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: reference numbers 26 and 27 are not shown in Fig. 2 (see specification, page 3, lines 22 and 24). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### *Specification*

2. The abstract of the disclosure is objected to because of undue length. Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities:

- on page 5, line 3, "receiving" should be changed to "transmitting";

line 4, "transmitting" should be changed to "receiving" in order to be consistent with Fig. 5.

Appropriate correction is required.

***Claim Objections***

4. Claims 7, 9, and 20 are objected to because of the following informalities:

- in claim 7, line 3, a comma should be changed to a colon to put the claim in a better form;

line 4, "IC" should be spelled out to avoid any misinterpretation;

- in claim 9, line 9, "a potential" should be changed to "ground" to give antecedent basis to "the ground" in claim 19 and be consistent with D3 of Fig. 5;

- in claim 20, line 7, "a first port" should be changed to "the first port" to refer to the first ported cited in line 5 of the claim;

line 9, "the receiving signal" should be changed to "a receiving signal" to avoid lack of antecedent basis.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which

it is most nearly connected, to make and/or use the invention. The specification including drawings does not adequately disclose a TDD type power amplification module which is provided between (a) the class II BT module comprising both a BT transceiver IC and a TDD transmitting and receiving switch and (b) the antenna. Note that Fig. 4 of the claimed invention shows that the TDD power amplification module 40 is located between the BT transceiver IC 10 and the antenna, and Fig. 5 shows the details of the TDD power amplification module 40 which comprises pin diodes D1, D2, and D3 acting as a switching unit (see the specification on page 9, lines 1-page 11, lines 6). No where in the specification or drawing teaches the TDD power amplification module 40 connecting between (a) the class II BT module comprising both a BT transceiver IC and a TDD transmitting and receiving switch and (b) the antenna in such a way to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1-7, it is unclear what a TDD type is because it is unclear what "type" is intended to convey. See MPEP 2173.05(b). Therefore, the claims are vague and indefinite. It is suggested that the word "type" should be removed.

*Claim Rejections - 35 USC § 102*

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 8 and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by the admitted prior art (herein after “APA”) (the specification and Fig. 2).

Regarding claim 8, as shown in Fig. 2, APA teaches a bluetooth module (20) comprising:

A bluetooth transceiver (21) having a first terminal (TX and RX, collectively) through which a transmitting signal and a receiving signal are transmitted, and generating a TDD transmitting and receiving mode control (TDD-TXON) signal (specification, page 3, lines 14-18).

A TDD power amplification module (22, 23, 24, 25, 26, and 27, collectively) formed of an integrated circuit (22, 23, 24, 25, 26, and 27, collectively, are interconnected, and therefore must form an integrated circuit as shown),

having a second terminal (TDD transmitting and receiving switch 26) receiving the TDD transmitting and receiving mode control (TDD-TXON) signal,

having a first port connected to the terminal of the Bluetooth transceiver (a first port reads on the interfaces on 22 and 23 for connecting 22 and 23 to TX and RX of 21, respectively and collectively),

having a second port (an interface on frontend filter 27 for connecting 27 to antenna ANT),

amplifying the transmitting signal received from the bluetooth transceiver (21) through the first port (the transmitting signal received from TX through 22 is amplified by PA 24 based on input of TDD-TXON) to output the amplified transmitting signal through the second port according to the TDD transmitting and receiving mode control (TDD-TXON) signal, and

transmitting the receiving signal received through the second port (an interface on 27 for connecting 27 to antenna ANT) without amplifying the receiving signal (in the receiving direction, the receiving signal is forwarded from ANT to 27, 26, and 23 without going through 24).

See specification, page 3, lines 14-25.

Regarding claim 20, as shown in Fig. 2, APA teaches a bluetooth module (22, 23, 24, 25, 26, and 27, collectively) coupled to an external integrated circuit (21) and an antenna (ANT) comprising:

A TDD power amplification module (22, 23, 24, 25, and 26, collectively) formed of an integrated circuit,

having a second terminal receiving a TDD transmitting and receiving mode control (TDD-TXON) signal from the external integrated circuit (21),

having a first port (interfaces on 22 and 23 connecting to TX and RX of 21, collectively) connectable to a terminal (TX and RX, collectively) of the external integrated circuit (21),

having a second port (an interface on TDD transmitting and receiving switch 26 for connecting 26 to antenna ANT through frontend filter 27) connectable to the antenna (ANT), amplifying a transmitting signal received from the external integrated circuit (21) through the first port to output the amplified transmitting signal through the second port according to the TDD transmitting and receiving mode control (TDD-TXON) signal, and transmitting a receiving signal received through the second port (an interface on 26 for connecting 267 to antenna ANT) without amplifying the receiving signal (in the receiving direction, the receiving signal is forwarded from ANT to 27, 26, and 23 without going through 24).

See specification, page 3, lines 14-25.

***Allowable Subject Matter***

9. Claim 1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
10. Claims 9-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.



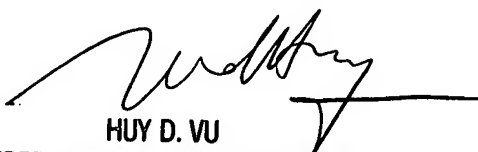
Application/Control Number:  
10/669,328  
Art Unit: 2616

Page 8

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nittaya Juntima  
November 30, 2007



HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600